

REMARKS

Claims 5-11 have been amended. Claims 1-4, 10 and 12 have been canceled. The subject matter of canceled claim 10 has been incorporated into claims 5-9. New claims 13 and 14 have been added. Thus, claims 5-9, 11, 13 and 14 are presented for examination. Support for the claim amendments may be found in the original claims, and throughout the specification, for example at page 9, lines 6-8 may be found in the original claims and throughout the specification. Support for new claim 13 may be found in the specification at page 9, line 19 to page 10, line 1. Support for new claim 14 may be found in the specification at page 14, lines 8-14. Thus, no new matter has been added. Reconsideration and withdrawal of the present rejections in view of the following comments are respectfully requested.

Claim objections

Claims 5-11 were objected to based on various informalities. All of these objections have been addressed in the amended claims. Specifically, claims 5-9 no longer depend on withdrawn claims 1-4, and the suggested corrections in section 3 (items B-E) of the Office Action have been made. Thus, reconsideration and withdrawal of the claim objections are respectfully requested.

Rejection under 35 U.S.C. §112, second paragraph

Claims 5-11 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite. The Examiner contends that recitation of “reacting a calcium silicate and a copper salt together” in claims 5-9 is vague and indefinite. Although Applicants do not agree with the rejection, claims 5-9 as amended no longer recite this language.

The Examiner rejected claims 8 and 9 based on insufficient basis for the phrase “acid treatment” in claim 6. Claims 8 and 9 as amended no longer recite “acid treatment.” This term is now recited in new claim 14 which states “treating the reaction product obtained with an acid.” Because this term is introduced for the first time in claim 14, and is preceded by “an”, antecedent basis in the claims from which it depends is not required.

In view of the claim amendment, Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. §112, second paragraph.

Rejection under 35 U.S.C. §102(b)

Claims 5-11 were rejected under 35 U.S.C. §102(b) as being anticipated by Cheng et al. (US 5,106,810). Claim 10 has been canceled, thus rendering the rejection moot as it applies to this claim. The rejection will be addressed as it relates to pending claims 5-9 and 11.

In order for a claim to be anticipated by a reference, each element of the claim must be found within the reference. The present claims relate to a combustion catalyst for purifying automobile exhaust gas. In particular, the claims recite methods of manufacturing automobile exhaust gas purifying combustion catalysts by combining copper oxalate with calcium silicate. Neither of these compounds is disclosed (or suggested) by Cheng et al. Moreover, Cheng et al. disclose catalysts that catalyze the dissociation of methanol to carbon monoxide and hydrogen, while the catalysts of the present invention are suitable for purifying automobile exhaust gas which contains a large amount of carbon monoxide. Thus, the catalysts of the prior art are used to produce carbon monoxide, while the claimed catalysts are used to remove carbon monoxide which are completely different processes.

Importantly, Cheng et al. neither disclose nor suggest that oxalates should ever be combined with copper in any chemical compound. Although Cheng et al. discloses at column 3, lines 39-41, that "suitable transition metal sources are nitrates, acetates, oxalates and carbonates...", column 2, lines 40-45 state that:

"The catalyst can also contain one or more alkaline earth or transition metals or their oxides or hydroxides chosen from the group of chromium, magnesium, calcium, barium, strontium, manganese, molybdenum, ruthenium and palladium."

The only copper-containing compounds disclosed by Cheng et al. are Cu-ZnO-Al₂O₃, Cu-ZnO-Cr₂O₃, Cu(NO₃)₂ and Cr(NO₃)₃ (Col. 2, lines 52-53; Col. 4, line 44). The transition metals referred to in the italicized section above are metals that are used in addition to the copper compounds disclosed in Examples 2-4, and therefore these transition metals exclude copper which is not mentioned in this section. Thus, a "transition metal" oxalate does not include copper oxalate as recited in the amended claims. Therefore, Cheng et al. does not disclose or

suggest copper oxalate and therefore cannot anticipate or render obvious claims 5-9, or claim 11 which depends on any one of claims 5-9. In addition, the source of silicon in Cheng et al. is silica (silicon dioxide), not calcium silicate as presently claimed.

The present specification discloses that combustion catalysts for purifying the exhaust gas of automobiles obtained by reacting a calcium silicate with a copper oxalate unexpectedly have high exhaust gas purifying activity (as disclosed in the specification in Examples 1 and 2). In contrast, as discussed above, Cheng et al. do not disclose or suggest reacting a calcium silicate and copper oxalate, nor does this reference teach or suggest that a combustion catalyst obtained by reacting a calcium silicate with copper oxalate has the ability to purify exhaust gases.

In view of the claim amendments and comments presented above, Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. §102(b).

Appl. No. : 10/827,058
Filed : April 19, 2004

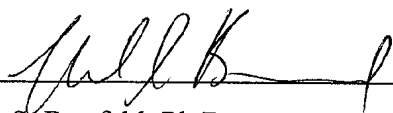
CONCLUSION

In view of the foregoing amendments and comments, it is respectfully submitted that the present application is fully in condition for allowance, and such action is earnestly solicited. If any minor issues remain which could be resolved by telephone, the Examiner is invited to contact the undersigned at the number provided below.

Respectfully submitted,

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Dated: 8/3/07

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